The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.
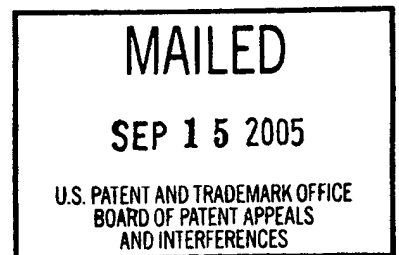
UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JACEK STACHURSKI and ALAN V. McCREE

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Appeal No. 2005-1989
Application No. 09/522,421

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ON BRIEF

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Before LEVY, SAADAT and NAPPI, **Administrative Patent Judges.**

NAPPI, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1 through 4. For the reasons stated *infra* we reverse the examiner's rejection of these claims.

The Invention

The invention relates to a linear predictive coding system for use in digital speech systems. See page 1 of appellants' specification. The linear predictive coding method classifies Fourier coefficients into overlapping classes with each class having its own vector quantization codebook(s). See page 2 of appellants' specification. There are two predictors, a strong and a weak used to predict the current frame of data from the prior frame of data. If a good approximation of the current frame of data from the prior frame can be made, the strong predictor is used and the difference between the predicted frame of data and the actual data will be small. If a good approximation of the current frame of data from the prior frame cannot be made, the weak predictor is used and the difference between the predicted frame of data and the actual data will be large. Thus, the strong predictors are smaller then the weak predictors. See pages 7 and 8 of appellants' specification. The method analyses the predictors used in a series of frames and adjusts the data such that a frame, that would otherwise use a strong predictor immediately following a frame which used a weak predictor, is changed to use the weak predictor, i.e. the sequence: strong predictor for 1st value, weak predictor for 2nd value, is changed to be weak predictor for 1st value, weak predictor for 2nd value. See page 9 of appellants' specification.

Claim 1 is representative of the invention and is reproduced below:

1. An encoding method using strong and weak predictors, comprising the step of:
(a) replace a strong predictor following a weak predictor with a weak predictor.

References

The reference relied upon by the examiner is:

McCree   5,966,689   Oct. 12, 1999
(filed Jun. 18,1997)

Rejections at Issue

Claims 1 through 4 stand rejected under 35 U.S.C. § 112 first paragraph as based upon a disclosure that is not enabling. Claim 4 stands rejected under 35 U.S.C. § 112 second paragraph as being indefinite. Claims 1 through 4 stand rejected under 35 U.S.C. § 102 as being anticipated by McCree.

Opinion

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of lack of enablement, indefiniteness and anticipation relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief, along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's

rejections and the arguments of appellants and examiner, for the reasons stated *infra*,

we will not sustain the examiner's rejection of claims 1 through 4 under 35 U.S.C.

§ 112, first paragraph, nor will we sustain the examiner's rejection of claim 4 under

35 U.S.C. § 112, second paragraph, nor will we sustain the examiner's rejection of

claims 1 through 4 under 35 U.S.C. § 102.

The rejection under 35 U.S.C. § 112, first paragraph.

The examiner states on pages 3 and 4 of the answer:

> Claims 1-4 are rejected under 35 U.S.C. § 112, first paragraph, as based
> upon a disclosure which is not enabling. The method of replacing a strong
> predictor following a weak predictor with a weak predictor in an encoding method
> using a strong and weak predictors is critical to the practice of the invention, and
> how this is accomplished is not included in the claims and is not enabled by the
> disclosure. See *In re Mayhew* 527 F2d 1229, 188 USPQ 356 (CCPA 1976). It
> is not clear from the claim language, why, or how this is accomplished. Also
> when the applicant claims replacing, "replace" to do what is not clear. Also , the
> method of replacing a strong predictor with a weak predictor is not being recited.
> In other words the recited claim language is missing an essential step.

Appellants assert, on page 4 of the brief, that the paragraph bridging pages 7

and 8 of the original specification describes the use of weak and strong predictors and

the step of replacement.

We concur with the appellants. The examiner has identified that a step of

replacing a strong predictor following a weak predictor with a weak predictor is a critical

step, which is not in the claims or the disclosure. We disagree. Claim 1 includes the

limitation "replace [sic, replacing] a strong predictor following a weak predictor with a

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weak predictor." While, this limitation is awkward, in that the limitation should read,

"replacing a strong..." we nonetheless consider this limitation to claim the critical step

of replacing a strong predictor following a weak predictor with a weak predictor.

Further, we find that appellants' specification is enabling for the limitation

replacing a strong predictor following a weak predictor with a weak predictor. The test

for enablement under the first paragraph of 35 U.S.C. § 112, is whether one reasonably

skilled in the art could make or use the claimed invention from the disclosed subject

matter together with information in the art, without undue experimentation. *United*

States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir.

1988), *cert denied*, 490 U.S. 1046 (1989). A disclosure can be enabling even though

some experimentation is necessary. *Hybritech Inc. v. Monoclonal Antibodies, Inc.,*

802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert denied*, 480 U.S. 947

(1987). In this case we find that appellants' specification on pages 7 through 9 teach

the use of a sequence of predictors for a sequence of frames of data. Page 9 of

appellants' specification states:

> a second preferred embodiment analyzes the predictors used in a series of
> frames and controls their sequencing. In particular, for a current frame which
> otherwise would use a strong predictor immediately following a frame which
> used a weak predictor, one preferred embodiment modifies the current frame to
> use the weak predictor but does not affect the next frame's predictor. Figure 1b
> illustrates the decisions.

We find that one of ordinary skill in the art, given the appellants' disclosure discussed

above and figures would be able to make the claimed invention.

Accordingly, we will not sustain the examiner's rejection of claims 1 through 4 under

35 U.S.C. § 112 first paragraph.

The rejection under 35 U.S.C. § 112, second paragraph.

The examiner states, on page 4 of the answer:

> It is not clear from the claim language, when the step "(a) said step (a) of claim 1 replaces a second successive strong predictor with a corresponding second weak predictor" happens, or how it happens, since claim 1 does not set forth any step in the method of replacing a strong predictor following a weak predictor with a weak predictor.

Appellants state on page 4 of the brief that "one of ordinary skill in the encoding

art would understand the terminology and method of the claims."

We concur with the appellants. Claims are considered to be definite, as

required by the second paragraph of 35 U.S.C. § 112, when they define the metes and

bounds of a claimed invention with a reasonable degree of precision and particularity.

See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976). As stated

supra we find that claim 1 does contain a step of replacing a strong predictor following

a weak predictor with a weak predictor. We consider claim 4 to further limit claim 1 by

requiring the second successive strong predictor to also be replaced by a weak

predictor. For example given the sequence, weak predictor for 1st value, strong

predictor for 2nd value, strong predictor for 3rd value; claim 1 would modify the sequence

to weak predictor for 1st value, weak predictor for 2nd value, strong predictor for 3rd

value, and claim 4 would modify the sequence to weak predictor for 1st value, weak

predictor for 2nd value, weak predictor for 3rd value. Accordingly, we will not sustain the

examiner's rejection of claim 4 under the second paragraph of 35 U.S.C. § 112.

The rejection under 35 U.S.C. § 102.

Appellants argue on page 3 of the brief:

With regard to claims 1-4, McCree has no suggestion of strong or weak predictors. Rather, the only "prediction" in McCree seems to be the pitch prediction (column 5, line 29) as used for an adaptive codebook of a CELP encoder and the general linear prediction coding of speech (LPC). There is no suggestion of strong or weak predictors as are required by sole independent claim 1; and thus no suggestion of the replacement of a strong predictor by a weak predictor under any circumstance.

In response, the examiner states, on page 8 of the answer:

McCree shows MELP coder and a CELP coder to equalize the spectral tilt without reducing formant enhancement by introducing an all pole filter (which is a weak predictor). (Col. 4, lines 36-44, especially line 41, which by implication others are stronger). Based on the claimed subject matter it is not clear how or which method is being claimed by the applicant to "replace a strong predictor following a weak predictor with a weak predictor."

We concur with the appellants. The examiner has made no showing of how

McCree teaches the limitation of replacing a strong predictor following a weak predictor

with a weak predictor as claimed. It appears that the examiner is under the misguided

perception that if a limitation is not enabled, the limitation need not be addressed when

applying art. This is not proper, the claim must be considered as a whole *In re Gulack,*

703 F. 2d 1381, 1385,217 USPQ 401, 403 (Fed Cir. 1983). The examiner must

examine all limitations in the claims. As the examiner has not shown, nor do we find, that McCree teaches replacing a strong predictor following a weak predictor with a weak predictor as claimed, we will not sustain the examiner's rejection of claims 1 through 4 under 35 U.S.C. § 102.

Other issues.

As stated *supra*, claim 1 is awkward in that it claims a step of "replace" which should be "replacing". Appellants are encouraged to submit an amendment to correct this ambiguity.

Also, as stated *supra*, it appears from the record that the examiner in applying art to the claims excluded the limitation of a "replacing a strong predictor following a weak predictor with a weak predictor." As this is improper, the examiner is encouraged to re-search the prior art to determine if claim 1 is patentable.

In summary, we will not sustain the examiner's rejection of claims 1 through 4

under 35 U.S.C. § 112, first paragraph, the examiner's rejection of claim 4 under

35 U.S.C. § 112, second paragraph or the examiner's rejection of claims 1 through 4

under 35 U.S.C. § 102.

REVERSED

STUART S. LEVY)
Administrative Patent Judge)
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MAHSHID D. SAADAT) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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ROBERT E. NAPPI)
Administrative Patent Judge)

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